

NON-TECHNICAL SUMMARY OF
ELECTRICAL TERMINOLOGY

622985

NOTES

ELECTRICITY

Current - flow of electricity; alternating, direct
AC Direction reverses at regular intervals;
frequency is usually 60 cycles per second.
DC Current flows continuously in same direction;
in some home plants and sometimes in downtown
or industrial areas. Most home plants are 32 v.
Equipment - either a-c or d-c; or both ac-dc.
Universal motors, incandescent lighting and heating
equipment, unless it has automatic control, can be
used on a-c or d-c if voltage is same in both cases.
Do not use other d-c equipment on a-c circuits, or
a-c equipment on d-c circuits.
Conductors - copper, aluminum, other metals
Insulators - glass, porcelain, rubber, plastics
Grounds - earth, driven rods, piping systems

COMMON TERMS OF ELECTRICAL MEASUREMENT

Term: Definition - unit of measurement of:

Volt	Pressure - difference in potential
Ampere	Rate of flow - current
Ohm	Resistance to flow
Watt	Power - rate of doing work
Kilowatt	1000 watts
Watthour	1 watt used for 1 hour (watts x time)
Kilowatt-hour	1000 watts used for 1 hour (1 kw. x 1 hr. or 100 w. x 10 hrs.)
Horsepower	746 watts (1 hp. = 1 kw. apparent power)

COST FORMULA FOR ELECTRICITY

watts x hours gives kwh
1000

Kwh x ¢ per kwh gives cost

USEFUL FORMULAS (Strictly speaking, these apply to
heating equipment and incandescent lighting only.)

$$\text{amperes} \times \text{volts} = \text{watts} \quad \frac{\text{watts}}{\text{volts}} = \text{amperes}$$

INFORMATION ON NAME PLATE

Manufacturer's name, address

Model number

Voltage

Wattage or amperage

Kind of current (a-c, d-c, or both ac-dc)

Frequency (usually 60 cycles)

RELATED ELECTRICAL TERMS

Generation plant Transmission lines

Substations Distribution lines

Types of distribution ("high," primary) lines

Single-phase (2-wire)

Three-phase (4-wire or 3-wire)

Transformer ($1\frac{1}{2}$, 3, 5, $7\frac{1}{2}$, 10 kva)
 Secondary lines (2- or 3-wire; 115 or 115/230 v.)
 Yard pole or power pole
 Service wires
 Service drops
 Kwh meter (watt-hour meter), dial or cyclometer type
 Entrance switch (main disconnect)
 Service entrances:
 2-wire 115 v. (110 to 120 v.)
 3-wire 115 v. and 230 v. (120/240 v.)
 Service equipment (load or control center)
 Circuit breaker or fuse box, sometimes main
 and branch panels with feeders or risers
 Protective devices - breakers or fuses
 Ground - electrical connection to earth
 Circuits
 Open ("dead," "cold"); closed ("live," "hot")
 Short circuit
 Types of interior-wiring circuits:
 General purpose (15 amp. branch circuit)
 Appliance (20 amp. branch circuit)
 Individual appliance or special purpose
 Convenience outlets (double or duplex, triple)
 Power or heavy-duty outlets
 Lighting outlets and switches
 Fixtures, portable lamps & equipment or appliances

ABBREVIATIONS USED IN ELECTRICAL LITERATURE

A.	Angstrom (unit for measuring wave length)
amp.	ampere (also a. or A)
a-c	alternating current (also AC, A.C., a.c.)
AM	amplitude modulation - radio
AWG	American Wire Gauge (also Awg.)
Btu	British thermal unit (also B.t.u.)
cal.	calorie
d-c	direct current (also DC, D.C., d.c.)
E-viton	Erythemal viton - sun lamp rating
f.c.	foot-candle (also FC, ft-c, ft.-c.)
f.l.	foot-lambert (also FL, ft-L, ft.-l.)
FM	frequency modulation - radio
hp.	horsepower (also HP, H.P., h.p.)
K.	Kelvin (degrees temperature; fluorescent)
kc	kilocycle (also kc.)
kva	kilovolt-ampere (also kv.-a., kv-a)
kw.	kilowatt (also kw, KW)
kwh	kilowatt-hour (also K.W.H., kw.-hr., kw-h)
rpm	revolutions per minute (also r.p.m.)
T-rated	tungsten-rated - switches
v.	volt (also V, v)
w.	watt (also W, w)
AHLI	American Home Lighting Institute
ASA	American Standards Association
CLM	Certified Lamp Makers
ETL	Electrical Testing Laboratories
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
UL	Underwriters' Laboratories